WEST Search History

DATE: Thursday, November 21, 2002

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT; PLUR=YES; OP=ADJ			
L7	obesity and "AD-36P"	1	L7
L6	obesity adj "AD-36P"	0	L6
L5	obesity adj adenovirus	0	L5
L4	obesity adj adenovirus.clm.	0	L4
L3	obesity and adenovirus.clm.	13	L3
L2	obesity and adenovirus	423	L2
L1	Ad36	6	L1

END OF SEARCH HISTORY

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(FILE 'HOME' ENTERED AT 17:25:13 ON 21 NOV 2002)

FILE 'MEDLINE' ENTERED AT 17:25:19 ON 21 NOV 2002

L1	0	S	VIRAL OBESITY
L2	40	S	ADENOVIRUS AND OBESITY
L3	0	S	AD TYPE 36
L4	0	S	ADENOVIRUS TYPE 36
L5	6	S	36 AND L2

AN 2002016777 MEDLINE
DN 21336400 PubMed ID: 11443497
TI Transmissibility of **adenovirus**-induced adiposity in a chicken model.
AU Dhurandhar N V; Israel B A; Kolesar J M; Mayhew G; Cook M E; Atkinson R L
CS Department of Nutrition and Food Science, Wayne State University, Detroit, Michigan 48202, USA.. ndhurand@sun.science.wayne.edu
SO INTERNATIONAL JOURNAL OF OBESITY AND RELATED METABOLIC DISORDERS, (2001 Jul) 25 (7) 990-6.
Journal code: 9313169. ISSN: 0307-0565.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200112
ED Entered STN: 20020121
Last Updated on STN: 20020121
Entered Medline: 20011213
AB BACKGROUND: We previously reported that human **adenovirus** Ad-**36** induces adiposity and paradoxically lower levels of serum cholesterol (CHOL) and triglycerides (TG) in animals. OBJECTIVE: To evaluate the transmissibility of Ad-**36** and Ad-**36** induced adiposity using a chicken model. DESIGN: Experiment 1--four chickens were housed (two per cage) and one from each cage was inoculated with Ad-**36**. Duration of presence of Ad-**36** DNA in the blood of all chickens was monitored. Experiment 2--two groups of chickens were intranasally inoculated with Ad-**36** (infected donors, I-D) or media (control donors, C-D). Blood drawn **36** h later from I-D and C-D groups was inoculated into wing veins of recipient chickens (infected receivers, I-R, and control receivers, C-R, respectively). On sacrifice, 5 weeks post-inoculation, blood was drawn, body weight noted and visceral fat was separated and weighed. RESULTS: Experiment 1--Ad-**36** DNA appeared in the blood of the inoculated chickens and that of uninoculated chickens (cage mates) within 12 h of inoculation and the viral DNA persisted up to 25 days in the blood. Experiment 2--compared with C-D, visceral and total body fat were significantly greater and CHOL significantly lower for the I-D and I-R. TG were significantly lower for the I-D. Ad-**36** was isolated from 12 out of 16 blood samples of the I-D that were used for inoculating I-R chickens. Ad-**36** DNA was present in the blood and the adipose tissue of the I-D and I-R but not in the skeletal muscles of animals selected randomly for testing. CONCLUSION: As seen in experiment 1, Ad-**36** infection can be transmitted horizontally from an infected chicken to another chicken sharing the cage. Additionally, experiment 2 demonstrated blood-borne transmission of Ad-**36**-induced adiposity in chickens. Transmissibility of Ad-**36**-induced adiposity in chicken model raises serious concerns about such a possibility in humans that needs further investigation.
CT Check Tags: Animal; Male; Support, Non-U.S. Gov't
***Adenovirus Infections, Human: TM, transmission**
Adenoviruses, Human
*Adipose Tissue: VI, virology
Chickens
*Cholesterol: BL, blood
DNA, Viral: BL, blood
*Disease Models, Animal
Disease Transmission, Horizontal
Electrophoresis, Capillary
***Obesity: VI, virology**
Plaque Assay
Specific Pathogen-Free Organisms
Time Factors

*Triglycerides: BL, blood
RN 57-88-5 (Cholesterol)
CN 0 (DNA, Viral); 0 (Triglycerides)

L5 ANSWER 3 OF 6 MEDLINE
AN 2001536582 MEDLINE
DN 21468250 PubMed ID: 11584109
TI Infectobesity: **obesity** of infectious origin.
AU Dhurandhar N V
CS The Department of Nutrition and Food Science and the Center for Molecular Medicine and Genetics, Wayne State University, Detroit, MI 48202, USA.. ndhurand@sun.science.wayne.edu
SO JOURNAL OF NUTRITION, (2001 Oct) 131 (10) 2794S-2797S. Ref: 46
Journal code: 0404243. ISSN: 0022-3166.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 200111
ED Entered STN: 20011004
Last Updated on STN: 20011105
Entered Medline: 20011101
AB In the U.S., the prevalence of **obesity** increased by 30% from 1980 to 1990, and this increase appears to be continuing. Although **obesity** has multiple etiologies, an overlooked possibility is **obesity** of an infectious origin. Six pathogens are reported to cause **obesity** in animals. Canine distemper virus was the first virus reported to cause **obesity** in mice, followed by Rous-associated virus-7, an avian retrovirus, which has been shown to cause stunting, **obesity** and hyperlipidemia in chickens. Next, the **obesity**-promoting effect of Borna disease virus was demonstrated in rats. Scrapie agents were reported to induce **obesity** in mice and hamsters. The final two reports were of SMAM-1, an avian **adenovirus**, and Ad-**36**, a human **adenovirus** that caused **obesity** in animals. Additionally, an association with human **obesity** is the unique feature of SMAM-1 and Ad-**36**. Although the exact mechanism of pathogen-induced **obesity** is unclear, infection attributable to certain organisms should be included in the long list of potential etiological factors for **obesity**. In addition, the involvement of some pathogens in etiology of **obesity** suggests the possibility of a similar role for additional pathogens.
CT Check Tags: Animal; Human
Nutrition
***Obesity**
Obesity: EP, epidemiology
Obesity: GE, genetics
Obesity: TH, therapy
Obesity: VE, veterinary
Obesity: VI, virology
Prevalence
United States: EP, epidemiology
*Virus Diseases
Virus Diseases: EP, epidemiology
Virus Diseases: GE, genetics
Virus Diseases: TH, therapy
Virus Diseases: VE, veterinary

L5 ANSWER 4 OF 6 MEDLINE
AN 2001019541 MEDLINE

DN 20408782 PubMed ID: 10951537
TI Increased adiposity in animals due to a human virus.
CM Comment in: Int J Obes Relat Metab Disord. 2001 Jan;25(1):143-5
AU Dhurandhar N V; Israel B A; Kolesar J M; Mayhew G F; Cook M E; Atkinson R L
CS Department of Nutrition and Food Science, Wayne State University, Detroit, MI, USA.. ndhurand@sun.science.wayne.edu
SO INTERNATIONAL JOURNAL OF OBESITY AND RELATED METABOLIC DISORDERS, (2000 Aug) 24 (8) 989-96.
Journal code: 9313169. ISSN: 0307-0565.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200011
ED Entered STN: 20010322
Last Updated on STN: 20020321
Entered Medline: 20001107
AB BACKGROUND: Four animal models of virus-induced **obesity** including adiposity induced by an avian **adenovirus** have been described previously. This is the first report of adiposity induced in animals by a human virus. OBJECTIVE: We investigated the adiposity promoting effect of a human **adenovirus** (Ad-**36**) in two different animal models. DESIGN: Due to the novel nature of the findings we replicated the experiments using a chicken model three times and a mammal model once. In four separate experiments, chickens and mice were inoculated with human **adenovirus** Ad-**36**. Weight matched groups inoculated with tissue culture media were used as non-infected controls in each experiment. Ad-**36** inoculated and uninfected control groups were housed in separate rooms under biosafety level 2 or better containment. The first experiment included an additional weight matched group of chickens that was inoculated with CELO (chick embryo lethal orphan virus), an avian **adenovirus**. Food intakes and body weights were measured weekly. At the time of sacrifice blood was drawn and visceral fat was carefully separated and weighed. Total body fat was determined by chemical extraction of carcass fat. RESULTS: Animals inoculated with Ad-**36** developed a syndrome of increased adipose tissue and paradoxically low levels of serum cholesterol and triglycerides. This syndrome was not seen in chickens inoculated with CELO virus. Sections of the brain and hypothalamus of Ad-**36** inoculated animals did not show any overt histopathological changes. Ad-**36** DNA could be detected in adipose tissue, but not skeletal muscles of randomly selected animals for as long as 16 weeks after Ad-**36** inoculation. CONCLUSIONS: Data from these animal models suggest that the role of viral disease in the etiology of human **obesity** must be considered.
CT Check Tags: Animal; Female; Human; Male; Support, Non-U.S. Gov't
***Adenovirus Infections, Human: CO, complications**
*Adenoviruses, Human
Adenoviruses, Human: GE, genetics
*Adipose Tissue
Aviadenovirus: GE, genetics
Body Composition
Brain: PA, pathology
Chickens
Cholesterol: BL, blood
DNA, Viral: IP, isolation & purification
*Disease Models, Animal
Mice
***Obesity: VI, virology**
Specific Pathogen-Free Organisms
Triglycerides: BL, blood

RN 57-88-5 (Cholesterol)
CN 0 (DNA, Viral); 0 (Triglycerides)

L5 ANSWER 5 OF 6 MEDLINE
AN 1999398715 MEDLINE
DN 99398715 PubMed ID: 10468615
TI Comparing the hypothalamic and extrahypothalamic actions of endogenous hyperleptinemia.
AU Wang Z W; Zhou Y T; Kakuma T; Lee Y; Higa M; Kalra S P; Dube M G; Kalra P S; Unger R H
CS Gifford Laboratories, Center for Diabetes Research, Department of Internal Medicine, University of Texas Southwestern Medical Center, Dallas, TX 75235, USA.
NC DK-02700-37 (NIDDK)
DK37273 (NIDDK)
NS32727 (NINDS)
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (1999 Aug 31) 96 (18) 10373-8.
Journal code: 7505876. ISSN: 0027-8424.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199910
ED Entered STN: 19991014
Last Updated on STN: 20000303
Entered Medline: 19991007
AB To determine whether the depletion of body fat caused by **adenovirus**-induced hyperleptinemia is mediated via the hypothalamus, we used as a "bioassay" for hypothalamic leptin activity the hypothalamic expression of a leptin-regulated peptide, cocaine- and amphetamine-regulated transcript (CART). The validation of this strategy was supported by the demonstration that CART mRNA was profoundly reduced in obese rats with impaired leptin action, whether because of ablation of the ventromedial hypothalamus (VMH) or a loss-of-function mutation in the leptin receptor, as in Zucker diabetic fatty rats. We compared leptin activity in normal rats made hyperleptinemic by **adenovirus** -leptin treatment (43 +/- 9 ng/ml, cerebrospinal fluid leptin 100 pg/ml) with normal rats made hyperleptinemic by a 60% fat intake (19 +/- 4 ng/ml, cerebrospinal fluid leptin 69 +/- 22 pg/ml). CART was increased 5-fold in the former and 2-fold in the latter, yet in **adenovirus**-induced hyperleptinemia, body fat had disappeared, whereas in high-fat-fed rats, body fat was abundant. Treatment of the high-fat-fed rats with **adenovirus**-leptin further increased their hyperleptinemia to 56 +/- 6 ng/ml without changing CART mRNA or food intake, indicating that leptin action on hypothalamus had not been increased. Nevertheless, their body fat declined **36%**, suggesting that an extrahypothalamic mechanism was responsible. We conclude that in diet-induced **obesity** body-fat depletion by leptin requires supraphysiologic plasma concentrations that exceed the leptin-transport capacity across the blood-brain barrier.
CT Check Tags: Animal; Comparative Study; Male; Support, Non-U.S. Gov't; Support, U.S. Gov't, Non-P.H.S.; Support, U.S. Gov't, P.H.S.
Adipose Tissue: AH, anatomy & histology
*Adipose Tissue: PP, physiopathology
Dietary Fats
Feeding Behavior
*Gene Expression Regulation
Gene Transfer Techniques
*Hypothalamus: ME, metabolism
Leptin
*Nerve Tissue Proteins: GE, genetics

Obesity: GE, genetics
***Obesity: PP, physiopathology**
Proteins: GE, genetics
Proteins: ME, metabolism
*Proteins: PH, physiology
RNA, Messenger: GE, genetics
Rats
Rats, Sprague-Dawley
Rats, Zucker
Reproducibility of Results
Reverse Transcriptase Polymerase Chain Reaction
Transcription, Genetic
Ventromedial Hypothalamic Nucleus: PH, physiology
CN 0 (Dietary Fats); 0 (Leptin); 0 (Nerve Tissue Proteins); 0 (Proteins); 0 (RNA, Messenger); 0 (cocaine- and amphetamine-regulated transcript protein)

L5 ANSWER 6 OF 6 MEDLINE
AN 1998197323 MEDLINE
DN 98197323 PubMed ID: 9536260
TI Leptin gene therapy and daily protein administration: a comparative study in the ob/ob mouse.
AU Morsy M A; Gu M C; Zhao J Z; Holder D J; Rogers I T; Pouch W J; Motzel S L; Klein H J; Gupta S K; Liang X; Tota M R; Rosenblum C I; Caskey C T
CS Department of Human Genetics, Merck and Co, Inc, West Point, PA 19486, USA.
SO GENE THERAPY, (1998 Jan) 5 (1) 8-18.
Journal code: 9421525. ISSN: 0969-7128.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199804
ED Entered STN: 19980422
Last Updated on STN: 20000303
Entered Medline: 19980415
AB We have compared the efficacy of daily injection of recombinant leptin protein (rh-leptin) with **adenovirus**-mediated delivery of the murine or human leptin gene (Ad-leptin) for treatment of **obesity** in the obese (ob/ob) mouse model. We demonstrate an improved correction profile for **obesity** and associated surrogate markers using the **adenovirus** delivery method. Rate of weight loss and percentage satiety were significantly greater in the mice treated with Adleptin. These findings were associated with lower peak serum leptin levels with Ad-leptin (22.9 +/- 2.6 ng/ml for the human gene, and 48.9 +/- 11.5 ng/ml for the murine gene) compared to rh-leptin (385.2 +/- **36**.0 ng/ml). (Values are given as mean +/- standard error of the mean.) Importantly rh-leptin and ex vivo-expressed Ad-leptin were equivalently active in a functional cell-based assay. The primary difference in the two therapeutic approaches is the continuous chronic secretion of leptin mediated by gene delivery, versus the intermittent bolus delivery and rapid clearance of the daily injection of rh-leptin protein. Thus, in vivo findings suggest that leptin effects are better achieved at lower steady-state levels, a pharmacological feature attained here by gene therapy. These findings may have implications for the potential use of leptin in the treatment of **obesity**.
CT Check Tags: Animal; Comparative Study
Adenoviridae
*Gene Therapy: MT, methods
Genetic Vectors
Injections, Intraperitoneal
Leptin

Mice
Mice, Obese
Obesity: BL, blood
***Obesity: TH, therapy**
Proteins: AD, administration & dosage
Proteins: AN, analysis
*Proteins: GE, genetics
Recombinant Proteins: AD, administration & dosage
Satiation
Statistics, Nonparametric
*Transfection: MT, methods
Weight Loss
CN 0 (Genetic Vectors); 0 (Leptin); 0 (Proteins); 0 (Recombinant Proteins)

Building, Madison, WI, 53706-1571 USA
SO International Journal of Obesity, (Dec., 1999) Vol. 23, No. 12, pp. 1333-1336.
ISSN: 0307-0565.
DT Article
LA English
SL English

L13 ANSWER 5 OF 12 BIOSIS COPYRIGHT 2001 BIOSIS
AN 1999:170633 BIOSIS
DN PREV199900170633
TI Antibodies to human adenovirus AD-36 are associated with body weight changes in monkeys.
AU **Dhurandhar, N. V.**; Bradley, S. M.; Kemnitz, J. W.; Atkinson, R. L.
CS Univ. Wisconsin, Madison, WI 53706 USA
SO FASEB Journal, (March 12, 1999) Vol. 13, No. 4 PART 1, pp. A369.
Meeting Info.: Annual Meeting of the Professional Research Scientists for Experimental Biology 99 Washington, D.C., USA April 17-21, 1999
ISSN: 0892-6638.
DT Conference
LA English

L13 ANSWER 6 OF 12 BIOSIS COPYRIGHT 2001 BIOSIS
AN 1998:533690 BIOSIS
DN PREV199800533690
TI Evidence for an association of an obesity virus with human obesity at three sites in the United States.
AU Atkinson, R. L. (1); **Dhurandhar, N. V.**; Allison, D. B.; Bowen, R.; Israel, B. E.
CS (1) Univ. Wisconsin Med. Sch., Madison, WI USA
SO International Journal of Obesity, (Aug., 1998) Vol. 22, No. SUPPL. 3, pp. S57.
Meeting Info.: Eighth International Congress on Obesity Paris, France August 29-September 3, 1998 International Association for the Study of Obesity
. ISSN: 0307-0565.
DT Conference
LA English

L13 ANSWER 7 OF 12 BIOSIS COPYRIGHT 2001 BIOSIS
AN 1998:533534 BIOSIS
DN PREV199800533534
TI Obesity induced by a human adenovirus can be transmitted by blood transfusion in chickens.
AU **Dhurandhar, N. V.**; Israel, B. E.; Kolesar, J.; Mayhew, G.; Aitkinson, R. L.
CS Univ. Wis., Madison, WI 53706 USA
SO International Journal of Obesity, (Aug., 1998) Vol. 22, No. SUPPL. 3, pp. S15.
Meeting Info.: Eighth International Congress on Obesity Paris, France August 29-September 3, 1998 International Association for the Study of Obesity
. ISSN: 0307-0565.
DT Conference
LA English

L13 ANSWER 8 OF 12 BIOSIS COPYRIGHT 2001 BIOSIS
AN 1997:185023 BIOSIS
DN PREV199799484226
TI Evidence for an association of a virus with obesity in humans.
AU **Dhurandhar, N. V.**; Augustus, A.; Atkinson, R. L.
CS Univ. Wisconsin Med. Sch., Madison, WI 53706 USA
SO FASEB Journal, (1997) Vol. 11, No. 3, pp. A230.
Meeting Info.: Annual Meeting of the Professional Research Scientists on Experimental Biology 97 New Orleans, Louisiana, USA April 6-9, 1997